

A SWITCHED NETWORK FOR LOW LATENCY COMMUNICATION

Hans Eberle
Neil C. Wilhelm

ABSTRACT OF THE DISCLOSURE

5 A switched network includes a buffer-less switch coupling the sending nodes
and the receiving nodes. The switch transmits packets successfully delivered to the
receiving nodes through the buffer-less switch with a fixed forwarding rate. The
switched network resolves conflicts in requests for a transmission path on the switch
from multiple packets by allocating the transmission path to a first requester in time
10 for the transmission path. If multiple requests for a switch resource collide by
requesting the switch resource at the same time, one of the requests is selected as a
winner and the packet or packets associated with the remaining requests are dropped.
The winning packet may be selected on a random basis or a round robin basis or
based on some other criteria. The requests from transmission paths may be contained
15 with the packets sent into the network and extracted on entry of the packet into the
network.